AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions, and listings, of claims in the application.

Listing of Claims:

1. (Currently Amended) A device for optically coupling a first optical element to a second optical element, comprising:

a first optical element having a first radiation penetration surface;

a second optical element having a second radiation penetration surface which is opposite the first radiation penetration surface;

a chamber delimited by the first and second radiation penetration surfaces as well as by a circumferentially closed side wall which connects the first and second radiation penetration surfaces, said circumferentially closed side wall defining a first section in the first radiation penetration surface and a second section in the second radiation penetration surface, the surface area of the first section being smaller than the surface area of the first radiation penetration surface, and the surface area of the second section being smaller than the surface area of the second radiation penetration surface;

a feeding conduit to the chamber for supplying index-adapting liquid;

a discharge conduit from the chamber for evacuating index-adapting liquid or gas from the chamber; and

a tilting ~~means~~ device configured such that the device can be tilted into a tilted position in which the feeding conduit is disposed at a lower level, as viewed in the direction of gravity, than the discharge conduit, and a supply ~~means~~ device is provided which supplies index-adapting liquid to the feeding conduit.

2. (Previously Presented) The device according to claim 1, wherein the feeding conduit and the discharge conduit are configured as channels in the first optical element.

3. (Previously Presented) The device according to claim 1 wherein the chamber is formed, as a whole or in part, by a groove in the first optical element.

4. (Previously Presented) The device according to claim 1, wherein the chamber is formed, as a whole or in part, by a space in an intermediate element which is situated, during optical coupling, between the first and second optical elements.

5. (Previously Presented) The device according to claim 1, wherein the cross-section of the chamber comprises a rectangular center portion and two triangular end portions, with the tips of the triangular end portions respectively facing the feeding conduit or the discharge conduit.

6. (Cancelled)

7. (Previously Presented) The device according to claim 1, wherein the second optical element comprises one or more sensor fields.

8. (Previously Presented) The device according to claim 7, wherein the second optical element is an SPR sensor plate and the one or more sensor fields are SPR sensor fields.

9. (Previously Presented) The device according to claim 7 wherein the one or more sensor fields are disposed on the side of the second optical element facing away from the second radiation penetration surface.

10. (Currently Amended) The device according to claim 7, wherein a radiation supply ~~means~~ device is configured ~~arranged~~ to couple radiation into the first optical element such that the entire surface of the one or more sensor fields is illuminated from the body of the second optical element.

11. (Previously Presented) The device according to claim 9 wherein a thermostatable block having a first fluid-conducting channel and a second fluid-conducting channel, and a gasket, said gasket surrounding the one or more sensor fields and cooperating with the thermostatable block so that a space is formed around the one or more sensor fields in which sample liquid can be fed or discharged through the first fluid-conducting channel and/or the second fluid-conducting channel.

12. (Currently Amended) The device according to claim 11, comprising a ~~means~~ device for supplying and discharging sample liquid, ~~said means~~ the device being connected with the first fluid-conducting channel, and the second fluid-conducting channel being designed as an air escape connection.

13. (Previously Presented) A method for optically coupling a first optical element to a first radiation penetration surface and a second optical element to a second radiation penetration surface which is opposite the first radiation penetration surface, said method comprising the steps of:

forming a chamber delimited by the first and second radiation penetration surfaces and by a circumferentially closed side wall which connects the first and second radiation penetration surfaces, said circumferentially closed side wall defining a first section in the first radiation penetration surface and a second section in the second radiation penetration surface, the surface area of the first section being smaller than the surface area of the first radiation penetration surface, and the surface area of the second section being smaller than the surface area of the second radiation penetration surface;

bringing arrangement of the first optical element, the second optical element and the chamber into a tilted position in which an index-adapting liquid supply point in the chamber is disposed at a lower level, as viewed in the direction of gravity, than an index-adapting discharge point; and

filling index-adapting liquid into the chamber.

14. (Previously Presented) The method according to claim 13, wherein the chamber is formed, as a whole or in part, by a space in an intermediate element which is inserted between the first and second optical elements.

15. (Cancelled)

16. (Previously Presented) The method according to claim 13, wherein the second optical element comprises one or more sensor fields.

17. (Previously Presented) The method according to claim 16, wherein the second optical element is an SPR sensor plate, and the one or more sensor fields are SPR sensor fields.

18. (Previously Presented) The method according to claim 16 wherein the one or more sensor fields are disposed on the side of the second optical element facing away from the second radiation penetration surface.

19. (Previously Presented) The method according to claim 18, comprising step of providing a thermostatable block with a first fluid-conducting channel and a second fluid-conducting channel and a gasket such that the gasket surrounds the one or more sensor fields and cooperates with the thermostatable block such that a space is formed around the one or more sensor fields in which sample liquid is supplied or discharged through the first fluid-conducting channel and/or the second fluid-conducting channel.

20. (Previously Presented) The method according to claim 19, wherein supply and discharge of the sample liquid is provided via the first fluid-conducting channel and air escape via the second fluid-conducting channel.

21. (Previously Presented) The method according to claim 20, wherein prior to the supply of the sample liquid into the space, an array of the first optical element, the second

optical element, the chamber, the thermostatable block, the gasket and the space is brought into a tilted position in which a sample liquid supply point in the space is disposed at a lower level, as viewed in the direction of gravity, than a sample liquid discharge point or an air escape point.

22. (Previously Presented) The method according to claim 21, wherein the entire surface of the one or more sensor fields is illuminated from the second optical element.

23. (New) A device for optically coupling a first optical element to a second optical element, comprising:

a first optical element having a first radiation penetration surface, the first optical element comprising a prism;

a second optical element having a second radiation penetration surface which is opposite the first radiation penetration surface, the second optical element having one or more sensor fields;

a chamber between the first and second radiation penetration surfaces, the chamber closed by a circumferential side wall which connects the first and second radiation penetration surfaces and the chamber closed except for openings for a feeding conduit and a discharge conduit, the feeding conduit to the chamber configured to supply index-adapting liquid and the discharge conduit from the chamber configured to evacuate index-adapting liquid or gas from the chamber,

the circumferential side wall defining a first section in the first radiation penetration surface and a second section in the second radiation penetration surface, the surface area of the first section being smaller than the surface area of the first radiation penetration surface, and the surface area of the second section being smaller than the surface area of the second radiation penetration surface.

24. (New) The device according to claim 23, wherein the feeding conduit and the discharge conduit are configured as channels in the first optical element.